

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A neutron detector comprising  
scintillating material  $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{X}_6 : x\text{Ce}^{3+}$ , where X is either Br or I, Ln is Y  
or Gd or Lu or Sc or La, where z is greater or equal to 0 and less or equal to 2, and x is above  
0.0005; and

a detector which detects luminescence emitted from the scintillating material as a  
measure of the presence of neutrons in a radiation sample applied to the neutron detector.

Claim 2 (Previously Presented): The neutron detector according to claim 1, wherein x  
is above 0.005.

Claim 3 (Previously Presented): The neutron detector according to claim 1, wherein x  
is less than 0.3.

Claim 4 (Previously Presented): The neutron detector according to claim 1, wherein x  
is less than 0.15.

Claim 5 (Previously Presented): The neutron detector according to claim 1, wherein it  
is in the form of a monocrystal.

Claim 6 (Previously Presented): The neutron detector according to claim 5, wherein  
the volume of the monocrystal is at least  $10 \text{ mm}^3$ .

Claim 7 (Previously Presented): The neutron detector according to claim 1, wherein the scintillating material is in the form of a powder.

Claim 8 (Previously Presented): The neutron detector according to claim 1, wherein the scintillating material is packed, sintered, or mixed with a binder.

Claim 9 (Previously Presented): The neutron detector according to claim 1, wherein the scintillating material formula is  $\text{Cs}_2\text{LiYX}_6:\text{xCe}^{3+}$ .

Claim 10 (Previously Presented): The neutron detector according to claim 1, wherein the scintillating material formula is  $\text{Rb}_2\text{LiYX}_6:\text{xCe}^{3+}$ .

Claim 11 (Previously Presented): A method of neutron detection comprising applying radiation to a detector comprising a material of formula  $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{X}_6:\text{xCe}^{3+}$ , where X is either Br or I, Ln is Y or Gd or Lu or Sc or La, where z is greater or equal to 0 and less or equal to 2, and x is above 0.0005; and measuring luminescence from the detector as a measure of the presence of neutrons in the radiation.

Claim 12 (Previously Presented): The method according to claim 11, wherein x is above 0.005.

Claim 13 (Previously Presented): The method according to claim 11, wherein x is less than 0.3.

Claim 14 (Previously Presented): The method according to claim 13, wherein x is less than 0.15.

Claim 15 (Previously Presented): The method according to claim 11, wherein the material is in the form of a monocrystal.

Claim 16 (Previously Presented): The method according to claim 15, wherein the volume of the monocrystal is at least 10 mm<sup>3</sup>.

Claim 17 (Previously Presented): The method according to claim 11, wherein the material is in the form of a powder.

Claim 18 (Previously Presented): The method according to claim 17, wherein the material is packed, sintered, or mixed with a binder.

Claim 19 (Previously Presented): The method according to claim 11, wherein the material formula is Cs<sub>2</sub>LiYX<sub>6</sub>:xCe<sup>3+</sup>.

Claim 20 (Previously Presented): The method according to claim 11, wherein the material formula is Rb<sub>2</sub>LiYX<sub>6</sub>:xCe<sup>3+</sup>.

Claims 21-30 (Cancelled)